

X. HISTORIC INTERIOR FINISHES

INTERIOR PAINT COLOR AND FINISHES: EXECUTIVE SUMMARY

In order to determine the original appearance of the interior of the Capitol, 125 samples of original paint, metal leafing and related finishes were harvested, tested and analyzed. The samples have been harvested from each of the building's five levels, with emphasis on the most architecturally significant spaces and details. However, it was also the intent to test enough samples from secondary (Preservation Zone II) spaces to also gain an understanding of the appearance of these areas.

The harvested samples were matched with Munsell color chips. "Paint Investigation" sheets were prepared containing two samples per sheet. Standardized information was provided for each sample including element code numbers, name of feature, element type, location, a Munsell chip to show the actual color, color notes, findings, test analysis, and a photo of the feature. These sheets are found in the Appendix of the main body of this report.

In addition, "Color Palette" sheets were prepared to show entire groups of colors in certain rooms, specifically the First Floor Under Rotunda Corridor Area, Library, East Corridor, Main Entry, East Wing Offices, West Wing Office, Governor's Board Room, Governor's Formal Office, Gold Room, Corridors, Staircase, House of Representatives Chambers, Supreme Court Corridor, and Senate Chambers. Recommendations were provided for the restoration treatment of each of these areas.

The paint sampling and color matching determined that the Capitol interior was originally finished in a complex, multi-hued, somewhat earth-tone-based palette typical of the 1914 Golden Era for American public buildings, during which the State Capitol was constructed. Among the findings were that in many key rooms, the original color scheme was more elaborate than it is now, and that the present colors are not the same as the originals. It was also determined, especially after studying historic photos of the interior, that further color and finish testing will be needed to discover painted-over stenciling, gold leafing and other decorative features lost over time. Among the key recommendations are the following:

- * Conduct further testing to determine the nature of still-hidden features. (Restoration Associates has submitted a proposal to do this additional work)
- * Re-paint all painted surfaces in the Preservation Zone I rooms and spaces and any restored spaces in Preservation Zone II, returning to the original color schemes, including gold leaf finishes, where not extant.
- * Restore or recreate damaged or missing stenciling and other decorative motifs and finishes not hidden behind newer layers of paint, walls or ceilings.
- * Follow the following prioritization for restoration of paint finishes: 1: House Chambers, 2: Governor's Board Room, 3: Rotunda, Atrium and related public spaces, 4: Senate Chambers, 5: Supreme Court Chambers, 6: Stairways; 7: Restored offices, meeting rooms and related spaces.

METHODOLOGY AND RECOMMENDATIONS

X. HISTORIC INTERIOR FINISHES

The methodology utilized to accomplish the paint investigation at the Utah State Capitol Building consisted of gathering approximately 125 samples from various locations as designated within the capitol. These samples were numbered and cataloged. Each sample was mounted in microcrystalline wax or cast in clear polyester. Clear polyester can sometimes alter the color; therefore, this procedure was not used on all samples. The microcrystalline wax holds the small samples in place. Polarizing light microscopic analysis was conducted on each sample. Micro chemical tests were not conducted on the small pigment samples because frequently the chemical tests destroy the pigment, which provides a less than positive identification result. In 1912-16, when the building was constructed, all manufactured pigmented paint was oil base with lead content. All other pigmented paints during that time were lime washes and glue distemper that were mixed on site with pigments, water and a binder. Orange shellac was found as a recurring first coat that penetrated the plaster sample about 1/32" deep. A thin coat of white primer was found closest to the plaster substrate on some of the samples. If the substrate was metal, the first coat was found to be a black or red oxide beneath the pigmented layer.

Evidence of metallic powder and gold leaf was often found. There is a distinct difference in the appearance of metallic powder and gold leaf when analyzed microscopically. The metallic powder appears very granular because of the brass and copper alloys that were mixed with lacquer or shellac. The samples containing metallic powders had darkened with age because of not having a seal coat applied. The gold leaf that was applied originally was still brilliant on the samples that were analyzed and appeared as a smooth continuous film.

The original color scheme was mostly earth tones that were accented with gold leaf and gold metallic powder. This color scheme was considered very fashionable in the "Golden Era" of architecture.

In the body of this report, we provide the Capitol's original color scheme with the harvested samples matched to Munsell color chips and identified as to their location in the building.

RECOMMENDATIONS

In some areas the original colors were similar with only a slight tonal difference. This may have been caused by the different rate of oxidation of that layer of paint and where the sample was harvested. It is likely that an interior paint finish analysis was previously performed. This would explain why some original colors are similar to existing hues with only slight tonal difference.

Many of the rooms and spaces have been altered. We have only gathered minimal amounts of samples from each area or room. Many of the rooms have been altered making it difficult to determine the original 1914 color scheme. It is recommended that in the important areas more samples be gathered to determine the 1914 historic color scheme.

If there have been more than 4 layers of paint applied in the past to areas of the decorative plaster bas relief moldings and medallions, it is recommended that a potassium hydroxide compound be applied to remove the existing layers of paint. This will enhance the sharpness of the detail that has been obscured by the many paint layers. This is especially important to the State medallion with the initial "U" in the center.

It is recommended that a qualified decorative painter with at least 5 years experience apply the gold leaf and the metallic powder or mica powder. The gold leaf should be applied with an oil base size. This oil size remains open longer and provides a greater degree of brilliance for the gold leaf. The metallic powder should not be premixed. The metallic powder should arrive to the site in a powder form and be mixed daily with the appropriate vehicle.

FIRST FLOOR

(A) First Floor Under Rotunda, 1.A

It is recommended that the architectural elements in the public spaces be re-painted in the original historic hues to achieve the 1914 appearance. The glass ceiling should have the paint removed to expose the glass. The original intent of the glass was to emit light from the 2nd floor Rotunda. If light can no longer be transmitted through the floor, an alternative solution would be to install lighting behind the glass to replicate this original 1914 architectural feature.

(B) Library, 1.C

The space has had significant alterations.

The recommendation is to return the space to the original color scheme. It is also recommended to remove and replace all of the old canvas on the walls and replace with new canvas. Re-apply the trim molding in the frieze area and paint in the original historic color palette. The trim molding details are sharper in plaster or polyurethane than in some modern wood reproductions.

SECOND FLOOR

(A) East Corridor, 2.A

The plaster walls appear to be modern plaster with only three layers of paint. All three layers are of similar tones of the same color. The stencil pattern is modern and is applied to the same new modern plaster substrate. Research was not conducted on the stencil pattern to determine if this is a replication of an original historical pattern or if it is a modern design element. The stencil could remain in place if the colors are compatible with the 1914 color scheme.

It is recommended that this area be returned to the original 1914 color scheme.

(B) Gold Room, 2.G

This room has two to four layers of paint. Most of the colors are the same as the historical 1914 color scheme with only a few changes. These changes were in the tonal values of the pigmented paint found on the walls and ceiling.

It is recommended that the walls be re-painted in the 1914 colors. A conservator should clean the architectural design elements. Re-apply the gold leaf in the original location. Re-apply the gold metallic powder to the appropriate 1914 architectural design elements. It is not recommended that the gold leaf be covered with gold metallic powder. A Conservator should examine the ceiling mural. Recommendations for the ceiling mural will be made at that time.

(C) The Governor's Board Room, 2.E

The flat 1" trim above the stencil pattern is of wood and was probably added when the sprinkler system was installed. This trim could have existed in 1914 and would have been of plaster. The original color of this trim is not known since this is not an original application. Investigation did not occur where the stencil pattern exists. The knowledge of whether the stencil pattern is a replication of the historic 1914 stencil pattern is unknown.

It is recommended that old photographs be researched to determine whether the 1" trim was original or if crown molding was applied. It is also recommended that a 1' X 1' square of the stencil pattern found on frieze be investigated layer by layer. This will determine if the upper wall had a pattern of design elements or if it had only a flat field of various colors. It is recommended that this room be restored to its 1914 ambiance.

(D) The Governor's Formal Office, 2.F

It is recommended that more samples be taken from this room. Further recommendations will be made at that time.

(E) Corridor, 2.J

It is recommended that more research be done in the archives to get information on the date of the existing stencil pattern.

(F) Main Foyer, 2.B

This space exhibits many layers of paint.

It is recommended that the entry be re-painted in the 1914 color scheme. The 1914 color scheme will enhance the marble walls and columns if they are original to the space.

(G) East & West Office, 2.C & 2.D

These areas have been significantly altered.

It is recommended that one of the offices be restored to the 1914 original color scheme. This will display an example of a typical office for the period of the building.

THIRD FLOOR

(A) Corridor, 3.A

Historical plaster has been removed and the modern plaster on the walls was painted with the same color several times. Analysis did not reveal any early-pigmented paint therefore; there is no evidence of the 1914 color scheme of this Corridor.

It is recommended that the corridor be painted in a pigment similar to the existing color that will complement the surrounding rooms.

B) Staircase, 3.B

It is recommended that all metal substrates of the staircase be striped, primed and painted in the original 1914 color scheme. This color scheme contains gold metallic powder to be applied in the appropriate historically correct areas.

C) House of Representatives, 3.H

This area has been significantly altered.

The historic significance of this room should be restored to the 1914 grandeur for this is where the state history has been created.

It is recommended that more samples be gathered to give a thorough investigation of this important area. Tarnished gold metallic powder, gold leaf and tarnished aluminum powder were found as a first or second layer on many of the samples. It is recommended that gold metallic powder or gold mica powder, gold leaf and aluminum powder be re-applied to the original 1914 color scheme. It is also recommended that all flat painted areas be painted in the historically correct polychrome colors.

FOURTH FLOOR

(A) Corridor of The Supreme Court, 4.B

The upper ornamental plaster frieze is in good condition.

It is recommended that the entire surface with its polychrome finishes be analyzed and documented. If the existing finishes are to remain, this area will need to be cleaned and a coating of an acrylic resin emulsion be applied by a conservator.

(B) Mezzanine of the Senate, 4.E

This area was significantly altered. The first pigmented layer and the existing layer of the egg and dart detail are similar. Paint analysis may have performed previously. The cornucopia in the frieze has been painted over 7 times and the existing pigmented layer does not match the original 1914 colors. Some areas have the original tarnished gold metallic powder. The bead and reel ornamental plaster detail originally had gold leaf that was later painted over with white primer, yellow ochre then the existing gold leaf was applied. The murals were not analyzed at this time.

It is recommended that the 1914 color scheme be applied. The tarnished gold metallic powder be replaced with gold metallic powder or gold mica powder. The existing gold leaf (that is in the 1914 historic location) should be cleaned by a conservator. It is also recommended that a qualified conservator analyze the murals. The conservator will make the assessment at that time.

C) Mezzanine of The House of Representatives, 4.J

This area has had many changes. The walls have a modern plaster finish coat. The original wall color is not known. Research is requested for determining the date of the existing stencil pattern. The gold leaf on the column capitols is a modern replacement on the original 1914 gold leaf. The existing pigmented paint does not match the 1914 color scheme. The decorative metal railing originally had more gold leaf application. The baseboards have been painted over many times.

It is recommended that further research take place to determine the original stencil pattern and color scheme. This research will help determine the wall color. The column capitols with pigmented paint and gold leaf should be returned to the historical 1914 color scheme. It is also recommended that the gold leaf be re-applied to the original locations on the decorative metal railing and that the baseboards be returned to the historic 1914 color scheme. This room is an important part of the building. More samples and analysis are recommended. This will help determine the original 1914 color scheme.

Prioritization of The Restoration of Interior Paint Finishes

1. House of Representatives
2. Governor's Board Room
3. Public Spaces
4. Senate Chambers
5. Supreme Court
6. Stairs

First Floor Under Rotunda Corridor Area, 1.A & 1.B Color Palette



10YR 8/4 Medium Yellow Gray Brown



10YR 9/1 Gray Yellow White



10YR 9/2 Brown Yellow White



5Y 9/2 Pale Yellow Gray White



10YR 8.5/2.5 Medium Gray Yellow Brown

Library, 1.C Color Palette



10YR 9/4 Medium Gray Brown Yellow



10YR 7/4 Medium Dark Gray Yellow Brown



10YR 8/4 Medium Yellow Gray Brown

East Corridor, 2.A
Color Palette



5Y 8.5/0.5 Yellow White Gray



10YR 7/3.5 Medium Yellow Brown

Main Entry, 2.B
Color Palette



10YR 7/3.5 Medium Yellow Brown



10YR 8/4 Medium Yellow Gray Brown



10YR 8/2.5 Pale Yellow Brown

East Wing Offices 223/225, 2.C
Color Palette



5Y 9/1 Gray Green White



5Y 8.5/1.5 Yellow Green Gray

West Wing Office, 2.D
Color Palette



10YR 8.5/3.5 Light Gray Brown Yellow



10YR 7/6 Gray Yellow Ochre

Governor's Board Room, 2.E Color Palette



10YR 8/4 Medium Yellow Gray Brown



Gold Metallic Powder



5Y 9/1 Gray Green White



10YR 9/1 Gray Yellow White



5Y 8.5/1.5 Yellow Green Gray



5Y 7.5/1.5 Medium Gray Green

Governor's Formal Office, 2.F Color Palette



10YR 9.25/0.5NN Off White

Gold Room, 2.G Color Palette



10YR 7/6 Gray Yellow Ochre



Gold Leaf



5GY 8.5/1 Pale Gray Green



10YR 8.5/2.5 Medium Gray Yellow Brown



10YR 8.5/3.5 Light Gray Brown Yellow



Gold Metallic Powder



5Y 8.5/0.5 Yellow White Gray



10YR 9/1 Gray Yellow White



5Y 9/2 Pale Yellow Gray White



10YR 8.5/1.5 Light Gray Brown White



10YR 8/2.5 Medium Gray Brown



10YR 9/2 Brown Yellow White



5Y 9/1 Gray Green White

Staircase, 3.B Color Palette



10YR 8/4 Medium Yellow Gray Brown



7.5YR/7/4 Medium Light Brown



Gold Metallic Powder



10YR 7.5/2 Light Gray Brown



10YR 9/1 Gray Yellow White

Corridor, 2.J Color Palette



10YR 7/8 Yellow Ochre



10YR 9/4 Medium Gray Brown Yellow



Gold Leaf

Corridor, 3.A Color Palette



10YR 9/2 Brown Yellow White



7.5YR 7/4 Medium Light Brown



10YR 7.5/2.0 Light Gray Brown

House of Representatives, 3.H & 4.J Color Palette



2.5Y 8.5/2 Medium Yellow Gray



10Y 6/4 Medium Dark Terra Verte



Aluminum Powder



2.5Y 6/4 Gray Yellow Green



10YR 7/8 Yellow Ochre



5GY 7/2.5 Medium Gray Yellow Green



10YR 8/4 Medium Yellow Gray Brown



10YR 7.5/2 Light Gray Brown



10YR 8/2.5 Pale Yellow Brown



Gold Leaf



Gold Metallic Powder



10YR 8.5/3.5 Light Gray Brown Yellow



5Y 9/2.5 Gray Green Yellow



10YR 7/4 Medium Dark Gray Yellow Brown



10YR 8.5/2.5 Medium Gray Yellow Brown



7.5Y 8.5/2 Light Gray Green



5Y 8.5/3 Medium Gray Green Yellow



10YR 9/1 Gray Yellow White



10YR 9/2 Brown Yellow White



5Y 9/0.5 Pale Yellow Gray

Senate, 4.E Color Palette



Gold Metallic Powder



5Y 8.5/0.5 Yellow White Gray



5Y 9/1 Gray Green White



10YR 9/2 Brown Yellow White



10YR 9/1 Gray Yellow White



10YR 9/4 Medium Gray Brown Yellow



10YR 7.5/2 Light Gray Brown

Corridor of Supreme Court, 4.B



5Y 8.5/0.5 Yellow White Gray

